

# CUSTOMISED SOLUTIONS FOR TYRE STANDARD TESTING

New tyre standards and labeling requirements emerging from countries outside the Americas and Europe has increased the demand for related testing equipment from:

- Government agencies that will enforce the standards they adopt.
- Tyre manufacturers who must now meet standards for both global export and domestic markets.
- Test centers operated by third parties who provide testing for smaller tyre manufacturers or industry trade groups.

The purchase of tyre testing machines requires a strategy that considers factors like the range of tyres being tested, the types of testing being performed, and the space available for the needed equipment. Upon developing a strategy, a facility may find that “standard” tyre testing machines cannot fulfill all their requirements—or do so in the most cost effective way.

## Consider customised

The Poling Group, a world leader in tyre testing equipment, provides standard machines with a host of selectable options as well as customised equipment to help facilities make the most of their equipment investment.

The inset photograph shows a tyre durability/endorance tester that Poling Group company ASMHasbach recently designed and built for the testing laboratory of a notable tyre manufacturer. The tyre company exports to over 100 countries in addition to supplying a domestic market that recently implemented tyre labeling on a voluntary basis.

## Cost efficient with high throughput

Like many testing facilities and manufacturing QA departments, this tyre maker found the bulk of its testing efforts focused on tyre durability and endurance. This type of testing, a primary requirement for most standards bureaus, often



6 position Tyre Durability/ Endurance Machine (Overhead safety fencing removed for clarity)

requires lengthy test cycles (as opposed to other, typically shorter tests like camber or high speed).

The acquisition of this customised 6-position horizontal machine allowed the tyre maker to achieve 50% more productivity over a “standard” 4-position machine, with only a 10% increase in equipment cost.

Most of the cost savings came from the horizontal drum and spindle arrangement that tests up to six tyres, as compared to the standard vertical drum and spindle that can test only one or two tyres at a time. The single drum and spindle also means less framing, motors, drives, and bearings.

This novel arrangement required designers to overcome special challenges to ensure a robust machine that would exceed the demanding requirements of standards testing.

For example, the drum axle had to resist bending moment induced by a variety of individual loads that can be randomly distributed across the six stations. Excessive bending moment, if not handled correctly, leads to premature bearing failure.

The selection of top and bottom bearings for the horizontal drum also required special consideration, as compared to selecting the less complex side bearings required for vertical drum placement.

ASM-Hasbach drew upon a rich and long tradition of key R&D equipment design and development to deliver this machine, which enables each station to have its own tyre loading capability and individual test program that can be paused and then resumed, as desired.

In addition to durability and endurance testing, the machine also provides ambient temperature readings and options that include:

- Inside/outside tyre temperature
- Tyre pressure regulation
- Tyre deflection
- Rolling radius and circumference ▲

**(Visit [www.PolingGroup.com](http://www.PolingGroup.com) to learn more about ASM-Hasbach and the complete line of durability, endurance, characteristic, and rolling resistance machines available for your test facility)**